

**REMARKS**

The non-elected claims have been amended to facilitate rejoinder per MPEP 821.04(a). Claims 7 and 9-15 have been amended to resolve an issue raised by the Examiner without narrowing the scope of the claims. The claims have also been amended to make editorial changes.

Entry of the above amendments is respectfully requested.

**Election and Rejoinder**

On page 2 of the Office Action, in paragraph 1, the Examiner notes that claims 1 and 4-17 (Group I) have been elected without traverse.

Applicants respectfully request rejoinder of the other groups after Group I is found to be allowable. Further, Applicants note that claim 2 is encompassed by claim 1, so it should be rejoined when claim 1 is found to be allowable. In this regard, Applicants note that the difference between claim 1 and claim 2 is the presence of component (D) in claim 2. Accordingly, to further clarify that claim 2 should be rejoined upon allowance of claim 1, Applicants have amended claim 2 so that it depends on claim 1 and simply further comprises component (D). Similarly, since claims 18 and 20, which are directed to image recording layers, originally recited a composition corresponding to the composition of claim 1, Applicants have amended claims 18 and 20 to depend from claim 1 to facilitate rejoinder. In this regard, Applicants refer the Examiner to the provisions of MPEP 821.04(a), which indicates that where restriction is required between products and all claims directed to an elected invention are

allowable, any restriction requirement between the elected invention and any non-elected invention that depends from an allowable claim should be withdrawn.

In view of the above, rejoinder of the non-elected claims upon allowability of the elected invention is respectfully requested.

### **Objection**

On page 2 of the Office Action, in paragraph 2, the Examiner has objected to claims 7, 9, 11, and 13-15 because "heterocycle" should be changed to --heterocyclic hydrocarbon--.

In response, Applicants believe that the term "heterocycle" is acceptable and would be understood by one skilled in the art (indeed, Applicants note that the term "heterocycle" is used in the English language abstract of JP 11-020318 cited by the Examiner). Further, it is not clear that the term "heterocyclic hydrocarbon" is appropriate, because one might consider that a hydrocarbon contains only carbon and hydrogen atoms (see, e.g., the attached definition from the Penguin Dictionary of Chemistry, 3<sup>rd</sup> edition), while a heterocycle would contain at least one other atom as well, such as a nitrogen atom.

However, to expedite allowance, Applicants have amended "heterocycle" to "heterocyclic compound" to resolve this issue.

In view of the above, Applicants submit that this objection has been overcome, and withdrawal of this rejection is respectfully requested.

**Anticipation Rejection over Kenji et al**

On page 2 of the Office Action, in paragraph 4, claims 1, 4-9, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kenji et al (JP 54-092526).

**The Examiner's Position**

The Examiner's position is basically that Kenji et al disclose a masking material as ink or coating, comprising a -SH group-containing organic sulfur compound with acid stability and heat resistance, an amine compound, and phenolic and/or rosin type alkali soluble resin.

**Applicants' Response**

Applicants respectfully submit that the present invention is not anticipated by (or obvious over) Kenji et al, and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

Basically, Applicants submit that Kenji does not teach or suggest an infrared absorbing agent or the requirement that the solubility of the resin composition in an alkaline aqueous solution is changed by exposure with an infrared laser beam.

In more detail, since Kenji is directed to masking material for plating Kenji does not teach or suggest the use of infrared absorbing agent. Also, Applicants again note that Kenji does not teach that the solubility of the resin composition in alkaline solution is changed by exposure to infrared beams, either.

Thus, Applicants submit that the present invention is not anticipated by (or obvious over) Kenji et al, and withdrawal of this rejection is respectfully requested.

**Obviousness Rejection over Kenji et al in view of Miura et al**

On page 4 of the Office Action, in paragraph 6, claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenji et al. (JP 54-092526) in view of Miura et al. (JP 11-020318 A).

**The Examiner's Position**

The Examiner's position is basically that while Kenji et al does not disclose the specific -SH group-containing organic sulfur compounds used in the composition of claims 11-15, Miura et al disclose those -SH group-containing sulfur compounds, and well as disclosing -SH group-containing sulfur compounds disclosed by Kenji et al. Thus, the Examiner asserts that it would have been obvious to use -SH group-containing sulfur compounds of Miura in Kenji to obtain the present invention.

**Applicants' Response**

Applicants respectfully submit that the present invention is not obvious over Kenji et al in view of Miura et al, and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

Initially, Applicants note that Kenji does not teach or suggest all the elements of the invention of present claim 1 as discussed above. Further, Applicants submit that Miura does not make up for the deficiencies of Kenji. That is, Miura also fails to disclose the use of infrared absorbing agent or the change in solubility of the resin composition in alkaline composition caused by exposure to infrared beams. Thus, Applicants submit that the combination of Kenji and Miura does not teach or suggest the invention of even present claim 1.

Moreover, Applicants note that Miura is directed to thermal recording materials, which belong to a totally different technical field from the field of masking material for plating as in Kenji. Therefore, Applicants submit that there is no motivation to even combine the disclosures of Kenji and Miura. In this regard, Applicants submit that merely because some compounds may overlap in the references, such does not mean that one would have been motivated to use a compound from a thermal recording material in place of a compound used in a masking material for plating.

Thus, Applicants submit that the present invention is not obvious over Kenji et al in view of Miura et al, and withdrawal of this rejection is respectfully requested.

**Obviousness Rejection over Kenji et al in view of Iguchi et al**

On page 4 of the Office Action, in paragraph 7, claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenji et al. (JP 54-092526) in view of Iguchi et al. (US 4,436,805).

**The Examiner's Position**

The Examiner's position is basically that while Kenji et al does not disclose the specific -SH group-containing organic sulfur compounds used in the composition of claims 10-11, Iguchi et al disclose those -SH group-containing organic sulfur compounds. Thus, the Examiner asserts that it would have been obvious to use -SH group-containing sulfur compounds of Iguchi to obtain the present invention.

**Applicants' Response**

Applicants respectfully submit that the present invention is not obvious over Kenji et al in view of Iguchi et al, and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

Initially, Applicants note that Kenji does not teach or suggest all the elements of the invention of present claim 1 as discussed above. Further, Applicants submit that Iguchi does not make up for the deficiencies of Kenji, so Applicants submit that the combination of Kenji and Iguchi does not teach or suggest even the invention of present claim 1.

Moreover, Applicants note that Iguchi is directed to silver diffusion complex transfer, which belongs to a totally different technical field from the field . Applicants submit that since Kenji uses silver for image formation, an infrared absorbing agent is unnecessary. In fact, Applicants submit that Kenji does not teach or suggest the use of infrared absorbing agent, as discussed above.

Since Kenji and Iguchi are directed to different technologies, Applicants submit that one would not have been motivated to substitute teachings from Iguchi into Kenji. In particular, Applicants submit that one would not have been motivated to use a compound from a silver complex diffusion transfer process in place of a compound used in a masking material for plating, so one would not have even combined the references.

Thus, Applicants submit that the present invention is not obvious over Kenji et al in view of Iguchi et al, and withdrawal of this rejection is respectfully requested.

**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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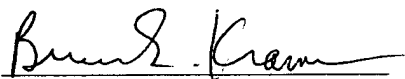
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**2 Covalent.** Formed by most of the non-metals and transition metals. This class includes such diverse compounds as methane,  $\text{CH}_4$  and iron carbonyl hydride,  $\text{H}_2\text{Fe}(\text{CO})_4$ . In many compounds the hydrogen atoms act as bridges, sometimes electron deficient. Where there is more than one hydride site there is often hydrogen exchange between the sites. Hydrogens may be inside metal clusters.

**3 Complexes.** These derivatives contain complex anions which may be considered as derived from co-ordination of an  $\text{H}^-$  ion to a metal or non-metal. Examples are the  $\text{BH}_4^-$  and  $\text{ReH}_9^{2-}$  ions.

**4 Transition metal hydrides.** These are formed by hydrogen uptake by the metal. The phases are often non-stoichiometric. The oxide hydride  $\text{LaSrO}_3\text{H}_{0.7}$  has long-range magnetic order.

Hydrides frequently function as hydrogenation catalysts.

**hydroiodic acid, HI.** Aqueous solution of HYDROGEN IODIDE.

**hydroaminoalkylation** Olefin plus CO plus amine or  $\text{NH}_3$  over catalyst to give an amine.

**hydroboration** The *cis*- addition of B-H bonds across the double bonds of olefins. Thus diborane,  $\text{B}_2\text{H}_6$ , reacts with ethene to give  $\text{B}(\text{C}_2\text{H}_5)_3$ . Breakdown of the alkyl borane with acid gives alkanes and with hydrogen peroxide gives alcohols (the orientation is the opposite to that which would result from the direct addition of water across the double bond). Catecholborane is often used in the presence of an organolanthanide complex. Precursors for the Suzuki reaction. See ORGANOBORANES.

**hydrobromic acid, HBr.** An aqueous solution of HYDROGEN BROMIDE.

**hydrocarbon resins** Thermoplastic polymers of mol.wt. less than 2000 obtained by cracking petroleum and from turpentine. Used in drying oils, with rubber and as plasticizers. Class includes coumarone-indene resins, petroleum resins, cyclopentadiene resins, terpene resins.

**hydrocarbons** This term includes all compounds of carbon and hydrogen only. They are subdivided into aliphatic and cyclic hydrocarbons according to the arrangement of the carbon atoms in the molecule. The aliphatic hydrocarbons are again subdivided into paraffins, olefins, diolefins, etc., according to the number of double bonds in the molecule. The cyclic hy-

drocarbons are subdivided into aromatic hydrocarbons and cycloparaffins.

**hydrochloric acid (muriatic acid), HCl.** An aqueous solution of HYDROGEN CHLORIDE. A saturated solution of HCl contains about 43% HCl and gives a constant-boiling mixture. Hydrochloric acid is used widely in the chemical industry, in the food industry (glucose, monosodium glutamate, cleaning), in metallurgy and in the oil industry. Extremely corrosive and handled in glass or plastic equipment or in apparatus using special alloys (Ta, Ni-Mo). U.S. production 1999 4.6 megatonnes.

**hydrochlorides** Salts formed by organic bases with HCl (or weak bases prepared in non-basic solvents, e.g. toluene). Also salts containing the  $[\text{ClHCl}]^-$  anion.

**hydrochlorinated rubber** Material used in films produced by passing HCl gas into a solution of rubber in benzene. Contains c. 30% Cl.

**hydrocortisone (17-hydroxycorticosterone),  $\text{C}_{21}\text{H}_{30}\text{O}_5$ .** A CORTISONE with an 11-OH group (reduction of C=O group). White crystals; m.p. 217–220°C. Made synthetically from naturally occurring steroids, such as diosgenin or hecogenin, the 11-hydroxy group being introduced where necessary by microbiological means. Used as its 21-esters for local treatment of inflammatory and allergic conditions.

**hydrocracking** Processes which involve both the catalytic cracking and hydrogenation of petroleum fractions, yielding high quality gasolines.

**hydrocyanic acid, HCN.** See HYDROGEN CYANIDE.

**hydrodealkylation** A catalytic process generally used for the production of benzene from alkyl aromatics, toluene being the most common feedstock. Methane is also formed.

**hydrodesulphurization** See DESULPHURIZATION.

**hydrodynamic radius of ions** The effective radius of an ion in solution.

**hydrofining** See DESULPHURIZATION. Used, under milder conditions, as a SWEETENING PROCESS or to remove alkenes for improvement of stability in light petroleum fractions.

**hydrofluoric acid, HF.** Aqueous solution of hydrogen fluoride. The system has a maximum boiling point at about 36% HF. Used widely in industry as a fluorinating agent and for anhydrous

